

REMARKS

Claims 1-5 and 7-23 are pending in the present application.

Claim Objections

Claims 1-5 and 7-23 were objected to because of informalities. The Office Action states that claim 1 now recites a “method of using,” but that it appears from the limitations of the claim, it should recite a “method of making.”

Applicants respectfully submit that the preamble of claim 1 properly recites “a method of using a liquid crystal display.” Claim 1 recites the step of “setting the direction of liquid crystal directors coinciding with an off-normal viewing direction of the liquid crystal display at the mid-point of the rotational twist when a voltage is applied to the liquid crystal layer.” This step is a step of using the liquid crystal display.

Withdrawal of the claim objection is requested.

Claim Rejections - 35 U.S.C. § 103

Claims 1-5, 7-9, 12-14, 22 and 23 were rejected under 35 U.S.C. § 103(a) as being unpatentable over **Paukshto**, *Two Novel Applications of Thin-Film E-Type Polarizers*, SID 02 Digest, pp. 722-725 (2002), in view of **Ignatov**, *Thin Crystal Film Polarizers and Retarders*, Conference: Liquid Crystal Materials, Devices, and Applications VIII (2002), and further in view of **Suzuki** (U.S. 2002/0089621); claim 10 was rejected under 35 U.S.C. § 103(a) as being unpatentable over **Paukshto** in view of **Ignatov** and further in view of **Kurtz** (U.S. 2005/0151905); claim 11 was rejected under 35 U.S.C. § 103(a) as being unpatentable over **Paukshto** in view of **Ignatov** and **Kurtz** and further in view of **Suzuki**; claim 15 was rejected

under 35 U.S.C. § 103(a) as being unpatentable over **Paukshto** in view of **Ignatov** and further in view of **Lazarev**, *E-type Polarizers and Retarders*, Proceedings of SPIE, vol. 4819, pp. 46-55 (2002); and claims 16-21 were rejected under 35 U.S.C. § 103(a) as being unpatentable over **Paukshto** in view of **Ignatov** and further in view of **Kaneko** (U.S. 2002/0145689).

Favorable reconsideration is requested.

Applicants respectfully submit that Paukshto in view of Ignatov and further in view of Suzuki does not teach or suggest:

setting the direction of liquid crystal directors coinciding with an off-normal viewing direction of the liquid crystal display at the mid-point of the rotational twist when a voltage is applied to the liquid crystal layer by selecting the alignment, material and thickness of the liquid crystal layer whereby a maximum image contrast is achieved in the off-normal viewing direction,

wherein the direction of the liquid crystal directors coincides with an off-normal viewing direction in the range of an azimuth angle of from 15 to 35 degrees in the voltage-on state and the contrast becomes the largest in such a direction

as recited in claim 1.

The Office Action acknowledges that Paukshto does not disclose these features. (Office Action, pages 3-4.) However, the Office Action takes the position that Paukshto's device would have achieved these features since Paukshto discloses the structure as recited in the claim 1. (Office Action, pages 4 and 11.) The Office Action further states that the result of achieving a maximum image contrast in the off-normal viewing direction would be inherent in a twisted nematic liquid crystal display device. (Office Action, page 4.)

However, claim 1 is a method claim, and thus, even though Paukshto discloses some structure that is recited in claim 1, Paukshto does not disclose performing the method steps as recited in claim 1, and does not achieve the results as recited in claim 1.

None of the references teach or suggest using a liquid crystal display by viewing from an off-normal viewing direction at the azimuth angle from 15 to 35 degrees. Furthermore, none of the references teach or suggest a setting such that at the mid-point of the rotational twist, the direction of liquid crystal directors coincides with an off-normal viewing direction of the liquid crystal display, if a voltage is applied to the LC layer in order to achieve the maximum image contrast in the off-normal viewing directions.

In addition, these features are not inherent in the prior art references because the device does not necessarily achieve the recited direction of the liquid crystal directors. Setting the liquid crystal directors as recited in claim 1 such that the direction thereof coincides with an off-normal viewing direction of the liquid crystal display is based on various factors. For example, NO 15 internal polarizers operated in the NW mode is used in Example 1 of the present specification, (Table 1; Fig. 8), and NO 21 internal polarizers operated in the NB mode is used in Example 3 (Table 3, Fig. 10). Each viewing direction may vary depending upon the kind of internal polarizers used. Thus, the features noted above are not inherent in the prior art references.

For at least the foregoing reasons, claim 1 is patentable over the cited references, and claims 2-5 and 7-23 are patentable by virtue of their dependence from claim 1. Accordingly, withdrawal of the rejection of claims 1-5 and 7-23 is hereby solicited.

Application No.: 10/613,328
Art Unit: 2871

Response under 37 CFR §1.116
Attorney Docket No.: 071174

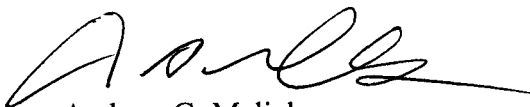
In view of the above remarks, Applicants submit that the claims are in condition for allowance. Applicants request such action at an early date.

If the Examiner believes that this application is not now in condition for allowance, the Examiner is requested to contact Applicants' undersigned attorney to arrange for an interview to expedite the disposition of this case.

If this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. The fees for such an extension or any other fees that may be due with respect to this paper may be charged to Deposit Account No. 50-2866.

Respectfully submitted,

WESTERMAN, HATTORI, DANIELS & ADRIAN, LLP

A handwritten signature in black ink, appearing to read 'A. Melick', with a long horizontal flourish extending to the right.

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